

The U.S. Department of Energy's (DOE's) Better Buildings Challenge is a national initiative that calls on leading CEOs and executives of U.S. companies, developers, universities, school districts, and state and local governments to make significant improvements in energy efficiency across their operations. Greater energy efficiency saves billions of dollars on energy costs, creates American jobs, and improves our environment.

Through the Better Buildings Challenge, public and private sector data center owners/operators partner with DOE and commit to improve the energy efficiency of their data centers. Partners transparently showcase the solutions they use and the results they achieve. DOE provides technical expertise and highlights the innovative work of Partners to spur billions in new investment and savings by others.

Demonstrating Leadership and Best Management Practices

Better Buildings Challenge Data Center Partners agree to improve the energy efficiency of a portfolio¹ of data centers by at least 20% within 10 years and showcase one specific project.

OR

Pledge to showcase a single data center of 100 kW or greater of IT load by improving its energy efficiency by at least 25% within 5 years.

Tracking Success

Data Center Partners will track their success using an industry standard metric, Power Usage Effectiveness (PUETM),² that supports quantification of non-IT infrastructure loads and associated energy efficiency related to data center IT power.

Partnership at a Glance

The Department Agrees to:

- ▶ Provide technical expertise and training
- ▶ Create networking opportunities to help Partners share best practices and innovative solutions
- ▶ Collaborate with Partners regularly
- ▶ Recognize Partners' progress and successes

NATIONAL BENEFITS BY THE NUMBERS

10.5%

The nationwide compound annual growth rate of data center electricity use from 2000 to 2010, addressed by the Better Buildings Challenge goals

\$4.2 Billion

Potential nationwide electricity savings with 100% of data centers reaching the 20% reduction goal by 2020

41 Billion kWh

The projected portion of U.S. commercial and industrial energy needs (> 2%) provided by avoided data center energy use through efficiency improvements by 2020

Data Center Partners Agree to:

- ▶ Develop an energy metering plan and establish data center portfolio performance baseline
- ▶ Implement energy efficiency improvement projects designed to reach goal of 20% improvement within 10 years (or 25% savings at a single site)
- ▶ Track and report annual progress
- ▶ Share strategies and best practice models used to achieve energy savings

Partner Recognition

Better Buildings Summit: Partners will be acknowledged and invited to present or participate in the annual Better Buildings Summit.

DOE Website: Partners will have dedicated organizational and showcase profile pages highlighting leadership and outlining their commitment and successes on the Better Buildings Challenge website.

Industry Publications: Partners demonstrating progress as they improve efficiency garner media attention through a variety of industry platforms, including magazines, blogs, and social media coverage.

How to Participate

Becoming a Better Buildings Challenge Data Center Partner is easy. Contact DOE via email at datacenterpartners@ee.doe.gov to receive the voluntary Partnership Agreement. Return the form signed by a senior executive. Upon receipt, DOE will organize a call with your organization to kick off the partnership.

The Value Proposition

Data center energy consumption can be reduced 20% to 40% by applying best management energy efficiency measures and strategies typically with short returns on investment. Make data center portfolio optimization an organizational goal and realize your organization's energy efficiency potential through the Better Buildings Challenge.

Data Center Partner Support and Engagement

Relationship Development and Management

- ▶ Portfolio definition and data tracking support
- ▶ Support ongoing progress tracking

Technical Support

- ▶ Data center baseline setting
- ▶ Metering plan development
- ▶ Technical resources clearinghouse
- ▶ Project review and development
- ▶ Industry trends and collaboration

Communication and Recognition

- ▶ Support documentation of showcase projects, organizational profile, and implementation models
- ▶ Feature results through Partner events and media, trade journal articles
- ▶ Promote solutions with Better Buildings webinar series
- ▶ Highlight achievements at the Better Buildings Summit

¹ Data Center Portfolio is defined as all Partner organization data centers in the United States and U.S. territories to include at a minimum localized (>500 sq. ft.), mid-tier, and enterprise class (>5000 sq. ft.) data centers (as categorized by the EPRI Analysis of IDC Special Study, Data Center of the Future, 2009). Inclusion of server rooms and server closets is optional.

² Power Usage Effectiveness (PUE™) is a measure of the effectiveness of the infrastructure, including cooling and power systems, serving the IT systems. PUE™ is a trademark of the Green Grid Association, used with permission.